

D. G. Hawes  
#18  
9.23/98

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant: Ronald A. Kramer

Examiner: J. Snay

Serial No.: 08/665,491

Group Art Unit: 1313

Filed: 06/18/96

Date: 09/14/98

For: **CONDITIONER, APPLICATOR AND PROCESS THEREOF**

Assistant Commissioner for Patents  
Washington, D.C. 20231

**Attention: Board of Patent Appeals and Interferences**

**BRIEF OF APPELLANT**

Sir:

In accordance with the Notice of Appeal filed by appellant on June 15, 1998, applicant hereby appeals from the final rejection of the above-identified patent application.

**1. THE REAL PARTY IN INTEREST:**

The real party in interest is Bandon Corp., a corporation organized under the laws of the State of Ohio, domiciled at 8420 Kilbirnie Court, Dublin, OH 43017, U.S.A.

**2. RELATED APPEALS AND INTERFERENCES:**

None.

**3. STATUS OF CLAIMS:**

Claims 13 - 20 were finally rejected on March 17, 1998, and the rejection was maintained in Advisory Actions of April 14, 1998 and May 15, 1998. All of claims 13, 15-18 and 20 are appealed. Claims 1 - 12, 14 and 21 - 28 are cancelled without bias or prejudice. Claim 19 was canceled in an Amendment "E" filed the same day as this Appeal Brief.

#### 4. STATUS OF AMENDMENTS:

Subsequent to the final rejection of March 17, 1998, applicant amended claims 13, 15 and 17 and canceled claim 14 in a response dated May 7, 1998. In a response to that amendment, dated May 15, 1998, the Examiner indicated that the proposed amendments will be entered upon the filing of a Notice of Appeal and an Appeal Brief. An amendment canceling claim 19 has not yet been considered.

#### 5. SUMMARY OF THE INVENTION:

The invention of the appealed claims relates to a process for treating the rubber, thermoplastic elastomer, or plastic wiper blades, by applying a sulfonic acid or salt thereof to the wiper blade. This is generally set forth in the first 2 sentences of the Summary of Invention. The invention also provides a method to easily soften the blade and remove contaminants from the surface of the blade without the necessity of removing the blade from its holder, or the vehicle, thereby extending the life of the wiper blade. The invention results in a reduction in streaking e.g., reduced streaking during the operation of the windshield wiper on an automobile. These uses are set forth in the second and third paragraph of the Summary of Invention in the Application. The preferred formulas of the sulfonic acids are given in claims 15, 16 and 17. Claims 18, 19 and 20 set forth additional components to the treating solution such as diluents, lubricants, viscosity modifiers and rubber protectorants.

In order to fully understand the operation of the invention and the operation of wiper blades it is helpful to understand:

A) Wiper blades are designed to operate by pushing water ahead of the moving conjunction of the blade and surface of the glass windshield.

B) To accomplish this the wiper should have a sufficiently high coefficient of friction measured on the surface being wiped. Otherwise, the blade will simply ride over the water, resulting in streaking.

C) While in use on a vehicle, wiper blade's surfaces are subjected to environmental contamination by insoluble grime and contaminants which cause a lowering of the blade's coefficient of friction, resulting in an increased propensity to ride over water and cause streaks which undesirably reduces visibility through the windshield.

D) In the present application, acids, and in particular sulfonic acid, are used to both remove grime and contaminants from the wiper and the windshield, and to increase the blade's coefficient of friction on the windshield, thereby returning the coefficient of friction to its original desirable coefficient of friction. This increase in the coefficient of friction typically continues even after the majority of the sulfonic acid has washed off, indicating a modification of the wiper by the acid, which is not taught by the prior art.

E) In Liddle, sulfonic acid was used in combination with polysiloxane for exactly the opposite purpose, that is to decrease the coefficient of friction of the glass windshield so that water would run off rather than adhere to the glass.

F) Similarly, Palcher accomplished his objectives of protecting wiper blades by decreasing the blade's coefficient of friction so that dirt and other contaminants would not adhere to the blade's surface. (Column 1, lines 27 - 30).

G) In the present application the objectives (reducing blade streaking) are met by just the opposite means, that is increasing the blade's coefficient of friction (by applying a sulfonic acid) so the blade pushes the water off the windshield rather than simply riding over the water.

6. ISSUES:

At issue is whether claim 13 is obvious under 35 U.S.C. § 103 over Liddle (U.S. Patent 3,998,643) in view of Palcher (U.S. Patent 3,956,174), and whether claims 15 - 20 are obvious under 35 U.S.C. § 103A as being unpatentable over Liddle in view of Palcher, and further, in view of Bright et al. (U.S. Patent 3,978,010).

Applicant has argued that the references applied by the Examiner are only combinable using hindsight, and there is no motivations in the references to combine them, nor to combine the particular elements required from the references to generate a process similar to applicant's claims. Applicant also argued there was closer prior art, which he supplied, which teaches against the use of acids on wiper blades that are causing streaking.

The Examiner argues that Liddle discloses a method for treating non-porous surfaces, including glass and plastic, comprising applying the composition which includes an alkyl polysiloxane, and an acid such as an aromatic sulfonic acid or hydrofluoric acid. The treatment is disclosed as being effective for rendering the surface water repellent, dirt repellent and frost and ice repellent (see col. 4, lines 1-34) and thus provides a motivation for using an acid in conjunction with a polysiloxane.

Applicant's pragmatic response to this argument is that the Liddle et al. treatment would reduce the coefficient of friction of the wiper blade causing streaking rather than preventing streaking.

Liddle teaches an automobile windshield as a particular surface to be treated as an example of the claimed nonporous surfaces. The Examiner admits Liddle differs from the claimed invention in that it fails to teach applying the composition to a windshield wiper. The Examiner notes that Palcher teaches treatment of

rubber, e.g., automobile tires, with an alkyl polysiloxane composition to protect against environmental conditions such as ozone and UV radiation. He asserts it would have been obvious to anyone skilled in the art to apply the treating composition of Liddle, for windshields, to wiper blades, in order to obtain water and dirt repellency as taught by Liddle, and further to obtain the rubber protection against environmental damage as taught by Palcher. The Examiner adds the reference Bright et al. for its teaching on the selection of aromatic sulfonic acids based upon their suitability for the intended purpose. He notes that Bright et al. is relied upon solely as evidence that sulfonic acids of the types recited in applicant's claims were known as useful in cleaning compositions.

An issue is whether the Liddle reference would be combinable by one skilled in the art with the Palcher reference, in view of the fact that Liddle is limited to providing water and dirt repellency by providing a polysiloxane surface treatment, while Palcher is trying to preserve rubber by penetrating the rubber with an emulsion containing diethyl polysiloxane (see abstract, 1<sup>st</sup> and 2<sup>nd</sup> paragraph). Applicant argues that the fact that the Palcher reference frequently uses the word "penetrating" of the rubber, brings out the fact that it is considered porous, while the Liddle reference is limited to teaching and claims for treatments for non-porous surfaces. Further, both the treatments of the Liddle and Palcher references would decrease the coefficient of friction, thereby increasing streaking.

A second issue is whether one skilled in the art, after reading the most relevant prior art, i.e. U.S. Patent 4,045,838 to Porter; U.S. Patent 4,256,683 to Porter; U.S. Patent 3,997,935 to Porter, and U.S. Patent 3,035,297 to Overman, which teach that inorganic acids such as nitric acid and sulfuric acid or chlorinating can be used to harden windshield wiper blades to reduce the coefficient of friction, would combine limited portions of the teachings of the Liddle and Palcher

references, so as to use only sulfonic acid as a treatment to reduce streaking caused by the wiper blade. It is applicant's position that used wiper blades do not need hardening (lowering coefficient of friction), but rather need softening (increasing coefficient of friction) to reduce streaking as already discussed. In view of the fact that the most relevant prior art teaches that inorganic acids such as nitric and sulfuric are used to harden new wiper blades that are too tacky (U.S. 4,045,838, col. 1, lines 39-43, and col. 2, lines 33-41) it would be unlikely that of one skilled in the art to think to apply acids to soften old wiper blades that were causing streaking.

#### 7. GROUPING OF CLAIMS

Claims 13, 15-18, and 20 stand or fall together.

#### 8. ARGUMENTS

Applicant continues is his argument that the Examiner has not established a prima facie case of obviousness under 35 U.S.C. § 103. Rather, he has, by using hindsight, combined selected elements from 3 references, only 2 of which, i.e., Bright et al. and Liddle, mention applicant's claimed sulfonic acid. The only reason the Examiner has to combine the Liddle reference and the Palcher reference is the use of polysiloxanes in both references (applicant neither needs nor claims polysiloxanes). In fact, polysiloxanes would be incompatible with the purpose of the present invention because they will actually increase rather than decrease wiper blade streaking, since the polysiloxanes reduce the coefficient of friction below the value needed to push water ahead of the wiper blades. Therefore, the common element (polysiloxane) does not form a strong basis to combine these two references when polysiloxane is not claimed by applicant.